PROFILE
Alberta
CANADA

Alberta Economic Development
Alberta Federal and Intergovernmental Affairs

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Overview

Alberta Today

Alberta is the most dynamic of Canada's 10 provinces in terms of both economic and population growth. Economic progress, spurred on in recent years by energy developments, is rapidly transforming Alberta into one of North America's leading economic regions. Alberta's population has grown accordingly, with immigration from across Canada and around the world playing a significant role in meeting the increased demand for skilled labour.

Alberta combines the excitement of industrial progress with the serenity of the Rocky Mountains, the rugged life of the cowboy and oil-rig worker with the world of finance and investment, and the beauty of the northern wilderness with the vigor of modern metropolitan centres. From this diversity is produced a harmony of spirit and purpose, and a faith in the future.

History

Dinosaurs once roamed the land which is now Alberta. Spectacular evidence of their existence remains in fossil form in various areas of the province. Plains Indians were the original human inhabitants. Their ancestors were believed to have crossed the Bering Strait from Asia in pre-historic times, subsisting as nomadic hunters and trappers. Indian tribes, which included the Cree, the Blackfoot, the Blood, the Peigan, the Sarcee and the Chipewyan, continued their nomadic traditions until some time after the arrival of the first Europeans in the eighteenth century.

Fur traders and missionaries were the first Europeans, but it was not until the latter half of the nineteenth century that European settlers began to build a permanent base here. The arrival of the Royal North West Mounted Police in 1874 and the completion of the Canadian Pacific Railway in 1885 brought stability to the region and permitted the establishment of permanent communities.

Before it became a province, Alberta was a region of the Northwest Territories, created when Canada purchased what was called Rupert's Land from the Hudson's Bay Company. Named after Princess Louise Caroline Alberta, fourth daughter of Queen Victoria, Alberta was established as a province of Canada in 1905.

Since 1905, Alberta has been transformed from a pioneer society into one of Canada's most modern and dynamic provinces. The province has continually attracted immigrants, with the major influxes occurring between 1896 - 1913 and following the two world wars. Its history has been stable, although the Great Depression of the 1930's, which brought a decline in population growth and production, was one of the most difficult periods experienced by the province in this century.

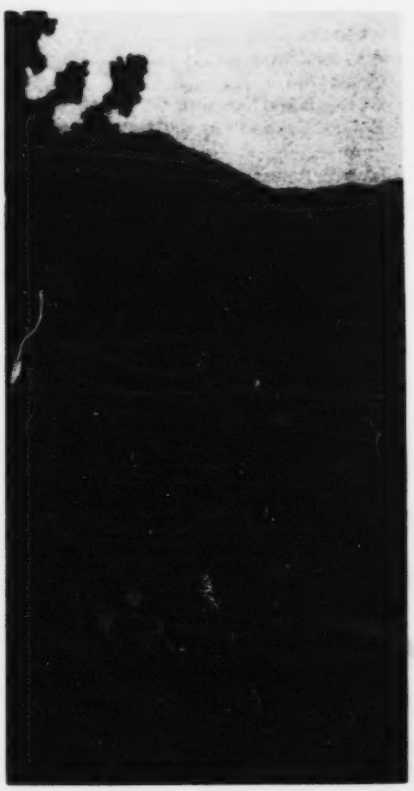
The year 1947, when a major oil discovery was made near Leduc, was a landmark for the province, ushering in its modern era. Continued immigration and prosperity in all sectors of the economy have given Alberta one of the strongest economies in North America. Alberta's population passed the two million mark in 1979 and currently stands at more than 2.3 million.

Geography

Alberta, located between 49° and 60° north latitude, covers an area of 661,000 square kilometres (255,200 square miles), of which 644,000 square kilometres (248,600 square miles) is land. The remainder is made up of several large bodies of water, such as Lesser Slave Lake and Lake Athabasca, plus countless smaller lakes, rivers and streams.

Alberta has the largest area of parkland in Canada. The most famous parks are Banff and Jasper National Parks, located in the Rocky Mountains.

Excluding the mountain region, Alberta has three general geographic areas. In the south, are rolling prairies. The central area is known as the "parklands", made up of mixed forests and plains. The northern region is basically wilderness and muskeg (a Cree Indian word for level swamp or bog). Elevations range from lowlands in the northeastern part of the province to mountains in the southwest. The two largest cities, Edmonton and Calgary, have elevations of 668 metres (2,192 feet) and 1,049 metres (3,442 feet), respectively.



Climate

Alberta's climate is subject to great variation. Daytime high temperatures during summer range from 16° C to 32° C. The average winter temperatures range from about -8° C in the south to -26° C in the northernmost part of the province. However, the air is dry and the low temperatures are not as uncomfortable as they would be in more humid areas.

Population

Alberta's population as of June 1982 was estimated to be 2.3 million, representing a density of approximately 3.5 persons per square kilometre. Annual population growth peaked at 4.4 per cent between 1980 and 1981. Between 1981 and 1982 the population grew by 3.5 per cent compared to the national rate of 1.1 per cent.

Net immigration accounts for about two-thirds of Alberta's annual population growth. During 1981 the population grew by about 94,700, of which 62,700 was a result of net immigration — 45,800 from other parts of Canada and 16,900 from abroad.

Alberta's two major cities, Edmonton and Calgary, had 1981 metropolitan census populations of 657,057 and 592,743 respectively. Other major centres are Lethbridge (54,072), Red Deer (46,393), Medicine Hat (40,380), St. Albert (31,996), Fort McMurray (31,000) and Grande Prairie (24,263).

The largest religious denomination in Alberta is the United Church of Canada, formed in 1925 by a union of Methodists, Presbyterians and Congregationalists. Also well represented are Roman Catholics, Anglicans, Lutherans, Presbyterians, Baptists, Mormons, and members of the Eastern Orthodox church. Other faiths are represented as well.

Government

Canada's ten provinces and two territories are linked by a federal system of government. Under this system, the central and provincial governments each have defined areas of jurisdiction. There also are municipal governments which have responsibility for the provision of many local services within their boundaries.

The division of legislative responsibilities between federal and provincial jurisdictions is set out in the *Constitution Act, 1867* (formerly the *British North America Act*), and subsequent amendments. In 1982, the Constitution was patriated from the United Kingdom, allowing Canada full power to amend its own Constitution. The *Constitution Act, 1982,* provides an amending formula for constitutional change and also contains a Charter of Rights and Freedoms.

Section 91 of the *Constitution Act, 1867,* lists 29 areas, such as defence and external relations, which fall under exclusive federal jurisdiction. There is also a clause which provides for federal responsibility in all areas not specifically detailed in other sections of the Act.

In Section 92 of the *Constitution Act, 1867,* 16 provincial responsibilities, such as health, property, and civil rights within provincial borders, are listed. Section 93 gives the provincial governments control over education. Section 109 provides that lands, mines, minerals and royalties from them belong to provinces. In Section 95, agriculture and immigration are identified as joint federal and provincial responsibilities with the federal government paramount in the event of a conflict of legislation.

Federal

Canada's system of government is based on the British parliamentary system. Formal executive power is vested in the Queen, whose authority is delegated to the Governor General. Legislative power is vested in the Parliament of Canada, which consists of the Queen, an appointed Senate, and the House of Commons elected by universal adult suffrage in 282 constituencies across Canada.

The Prime Minister and his cabinet determine executive policies and are responsible for them to the House of Commons. The cabinet is made up of members from the political party which has the largest number of seats in the House of Commons, although it may include some senators. Elections must be held within five years of a previous election, but are often held earlier upon the recommendation of the Prime Minister. The Prime Minister and his cabinet are, formally speaking, the Queen's advisors. In fact, virtually no significant actions can be taken by the Queen or Her representative in Canada, the Governor General, without cabinet advice.

The Governor General is appointed by the Queen on the recommendation of the Canadian prime minister. Governors General do not change as a result of elections and the position thus contributes to the continuity of government.

The Senate (Upper House) is a wholly appointed body, with appointments made by the Governor General upon the recommendations of the Prime Minister. All bills passed by the House of Commons must also be passed by the Senate. The Senate may initiate legislation. However, as it is not an elected body and cannot initiate money bills, it does not have authority comparable to that of the House of Commons.

Provincial

The Government of Alberta, like the federal government, has inherited the traditions of British parliamentary

democracy. In the province, legislative authority is vested in a single-chamber legislative assembly which now has 79 elected representatives and a Lieutenant-Governor, the Queen's representative in Alberta, who is appointed by Canada's Governor General.

The executive is made up of the Lieutenant-Governor in Council, a body composed of the Lieutenant-Governor, the Premier and the cabinet. The Premier and his cabinet ministers all are elected Members of the Legislative Assembly (MLAs), and are responsible to the assembly.

Although the MLAs are individually elected, most belong to a political party. Presently, the Progressive Conservative Party, led by Premier Peter Lougheed, has a majority of seats (75). The opposition consists of two members of the New Democratic Party and two independent members.

Alberta in the International Context

The impact that international developments have on Alberta has made it incumbent upon the province to become more actively involved in international affairs. This is a process which has accelerated over the course of the past decade. Alberta's interests in the international arena are concentrated primarily in the areas of trade, investment, and developments in the energy sector, with significant interests also in such areas as culture, international development assistance, science and technology, and education. The significance of international trade to Alberta has been given greater recognition, since 1979, with the appointment of a provincial cabinet minister responsible for international trade.

Trade and Investment

Production levels of Alberta's traditional economic mainstays (agriculture and energy resources) along with those of a number of promising new areas of activity (such as the manufacture of specialized oil and gas equipment and petrochemicals), far exceed the requirements of a relatively small domestic population. Alberta is therefore highly dependent upon external markets as outlets for its goods and services. Each year, exports account for approximately one-quarter of the province's gross domestic product.

Alberta exports of goods and services were valued at over $10 billion in 1981. The major portion, over three-quarters, went to the United States and was comprised primarily of natural gas and crude petroleum. Dependence upon the United States has declined in recent years, however, as oil shipments have been increasingly directed from export to Canadian markets. Meanwhile, export penetration of other areas, such as Asia and the European Community, has increased substantially. Major trade partners include Japan, the People's Republic of China, Korea, Australia, the United Kingdom and the Soviet Union.

Most of Alberta's exports are primary products, such as natural gas, crude petroleum, sulphur, coal, wheat, barley, canola and beef. However, the share of total exports made up by secondary products, including petrochemicals, oil and gas equipment, fertilizers and process foods, is increasing. So-called "invisible exports", which include transportation, engineering and consulting services, have also grown dramatically.

In order to reach Alberta's present level of economic development, a large proportion of capital investment and technology has been required from foreign sources. Investment is welcomed and encouraged in sectors such as oil, natural gas, coal, electricity, manufacturing, and particularly in petrochemicals and food processing.

Other International Activities

As a province with a rich and diverse ethnic and cultural make-up, Alberta seeks both to better understand and to be better understood by the world community. Cultural, educational and sports exchanges are an area of ongoing provincial interest.

In light of its responsibility on the international scene, Alberta has, since 1974, had an official program of international development assistance and emergency relief. Under the program, the Government of Alberta matches funds raised in the province by non-governmental organizations involved in a variety of world-wide development assistance projects. In this manner, the government, through the Alberta Agency for International Development which oversees the program, contributed over $7 million in its 1981/82 fiscal year to support 338 projects in 78 countries. These projects included rural and community development programs, drinkable water systems, health programs, and vocational training programs. The Alberta government is also involved in a number of direct assistance projects. For example, the Alberta Oil Sand Technology and Research Authority provides free analysis and testing services to countries with hydrocarbon resources similar to those in Alberta.

Alberta also recognizes the value of the interchange of ideas in the scientific, technological and academic fields. Mutually beneficial exchanges of ideas and people take place in such areas as oil recovery technology, energy administration, and the study of northern regions. Alberta is at the forefront of research related to oil sands, heavy oil production and enhanced recovery techniques and has co-operation agreements in these fields with nine countries. On the academic side, the province has also been involved in supporting Canadian studies programs in foreign universities.

To better promote Alberta and compliment the activities of Canada's Embassies, High Commissions, Consulates and Trade Offices around the world, Alberta has established a number of foreign offices. These international offices function as an effective vehicle for promoting trade and investment and for the distribution and collection of information on trade, investment, energy, tourism, immigration, cultural and educational exchange, and other areas of interest to Alberta. The offices also provide assistance in these areas to Alberta companies and institutions which are pursuing activities abroad. Alberta government offices are currently maintained in London, New York, Hong Kong, Tokyo, Los Angeles and Houston.

The Economy

Alberta's gross domestic product was approximately $47.2 billion in 1981, rising 13.2 per cent from $41.7 billion in 1980. Discounting for inflation, real gross domestic product, measured in constant 1971 dollars, virtually doubled from $7.8 billion to $14.6 billion over the 1971 - 1981 period, representing an average annual real growth rate of 6.4 per cent.

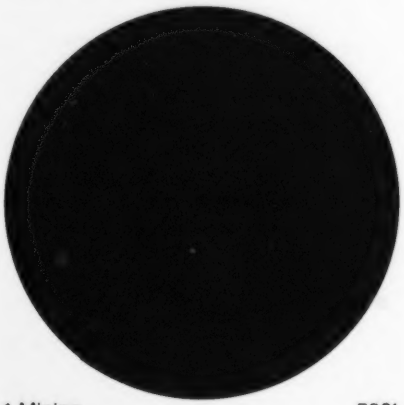
Investment growth in Alberta continues at a pace significantly greater than the national average. Estimated total private and public investment in 1981 amounted to $20.5 billion or about 20 per cent of all investment in Canada. In per capita terms, this represents about $9,200 compared to the Canadian average of $3,500.

The net value of production of commodity producing industries in 1981 reached $31.3 billion. Of this total, mining (including oil and gas) accounted for about 50 per cent, construction 26 per cent, manufacturing 14 per cent, agriculture 8 per cent and all others 2 per cent.

In 1981, the net value of construction activity in Alberta reached $8.2 billion. Engineering construction accounted for about 55 per cent of the total value of all construction, primarily due to petroleum-related expansion of industrial installations. Commercial construction, led by Edmonton and Calgary, was responsible for close to 25 per cent, while residential construction made up the remaining 20 per cent of total construction value.

National and international conditions affecting the petroleum industry enhanced the value of Alberta's mineral production to just over $17.6 billion in 1981. Of this total, $8.3 billion, or 49 per cent, represented the value of crude oil production and $8.1 billion, or 46 per cent, that of natural gas and natural gas by-products. Coal production, though substantially lower in value than the above resources, shows considerable growth potential.

Net Value of Production of Commodity Production Industries — 1981



1 Mining	50%
2 Construction	26%
3 Manufacturing	14%
4 Agriculture	8%
5 Other	2%

Total Net Value of Production = $31.3 Billion

Table 1 Alberta's Gross Domestic Product in Constant (1971) Dollars 1978 - 1981

	Millions of Dollars			
	1978	1979	1980	1981
Sales to Persons				
Sales to Government				
Gross Fixed Capital Formation				
Residential Construction				
Non-Residential Construction				
Machinery and Equipment				
Value in Physical Change in Inventories				
Non-Farm				
Farm and Grain in Commercial Channels				
Exports				
Imports				
Residual				
Gross Domestic Product in Constant 1971 Dollars				
Real Growth				

Distances in Kilometres

Taxation

The *Constitution Act, 1867* generally limits the provinces to direct taxation within their borders in order to raise revenues for provincial purposes. Consequently, with the exception of certain taxes in relation to natural resources, the provincial governments cannot impose indirect taxes unless they serve a regulatory purpose within their spheres of jurisdiction. Direct taxation is available to both the federal and provincial governments.

The Alberta tax regime is the most moderate in Canada. The government places no tax on retail sales or gasoline and has the nation's lowest rate of personal income tax. The corporate income tax rate is among the lowest in the country. This favourable tax climate has been made possible by the relatively large oil and natural gas revenues accruing to the provincial government, mainly in the form of royalties. The relative significance of this revenue source is reflected in the composition of budgetary revenues. Oil and gas revenues represent approximately 50 per cent of the total, and this figure excludes the oil and gas revenues that are allocated to the Alberta Heritage Savings Trust Fund (see separate section). In contrast, personal and corporate income taxes account for less than 30 per cent of budgetary revenues.

The federal government exercises its right to levy corporate and personal income taxes on all Canadian residents. The corporate rate is 36 per cent of taxable income (15 per cent for small businesses). Individuals pay on the basis of a progressive rate structure. In addition to income taxes, the federal government imposes a manufacturers' sales tax (five per cent of the selling price on building materials and nine per cent on all other manufacturers). The tax is levied only once at either the manufacturing, import, or wholesale stage.

Alberta Heritage Savings Trust Fund

In 1976 the Alberta Heritage Savings Trust Fund was established to improve the quality of life for Albertans and to invest in the expansion and diversification of the Alberta economy. Each year a percentage of Alberta's royalty receipts from non-renewable resources is transferred from the general revenue fund to the Alberta Heritage Savings Trust Fund. As of December 31, 1982, the assets of the fund totalled $13.1 billion.

The Fund consists of five investment divisions, each with distinct investment aims and criteria. The investment divisions are the Capital Projects Division, Canada Investment Division, Alberta Investment Division, Energy Investment Division and the Commercial Investment Division. Funds not invested under one of these divisions are invested by the Provincial Treasurer in a portfolio of marketable securities.

More than half the fund is accounted for by the Alberta Investment Division, which provides financing for housing, schools, roads, utilities and waterworks, as well as loans for small businesses, farms and farm-related businesses throughout Alberta. The Canada Investment Division and the Capital Projects Division are each authorized up to 20 per cent of the fund's assets. Through the Canada Investment Division, loans may be made to the federal government, to other provincial governments in Canada, or to other institutions if repayment is guaranteed by one of the governments. To date, more than one billion dollars has been invested by the Capital Projects Division on capital projects within Alberta that do not earn a direct financial return, but which provide economic and social benefits in such areas as new urban and mountain parks, agricultural and medical research, improved health care and facilities, airport terminals, grain hopper cars and Canadian educational materials. The Energy Investment

Table 2 **Alberta Heritage Savings Trust Fund** (As at December 31, 1982)

	Assets and Deemed Assets ($ millions)	(%)
Alberta Investment Division		
Canada Investment Division		
Capital Projects Division		
Deposits, Marketable Securities, and Portfolio Investments		
Commercial Investment Division		
Energy Investment Division		
Total	**13,084**	**100.0**

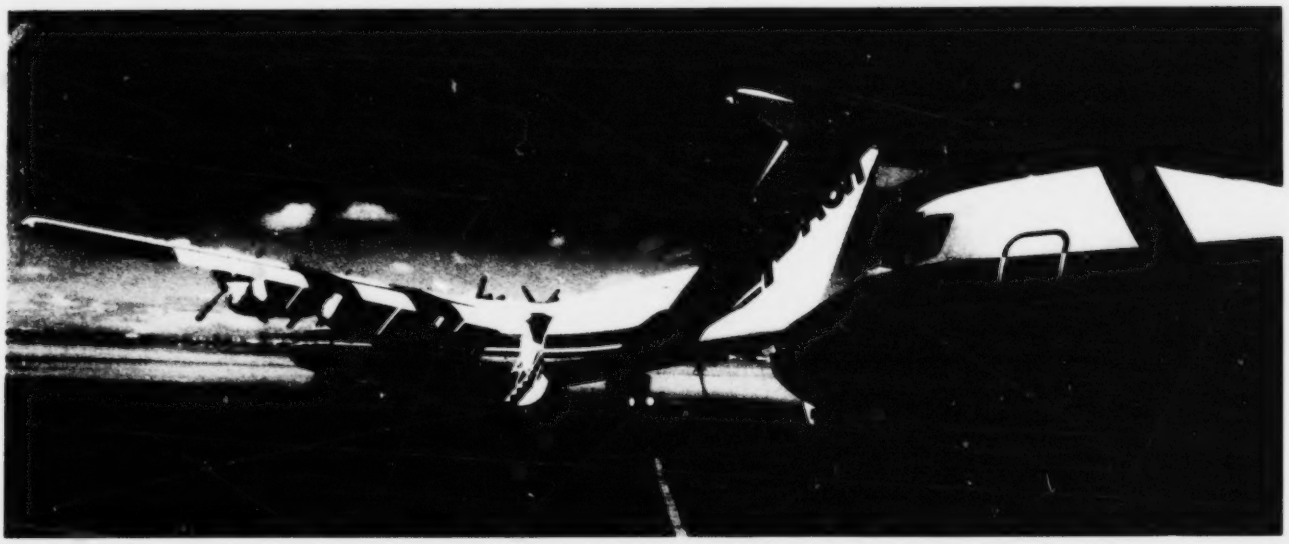
Division facilitates the development, processing and transportation of energy resources within Canada while yielding a reasonable rate of return, and the Commercial Investment Division invests in a broad range of activities. Table 2 summarizes the composition of the Fund as at December 31, 1982.

Exports

The increase in the value of Alberta's foreign exports has been phenomenal in recent years. In 1978, the "official" value of exports totalled $4.59 billion. By 1981, it had more than doubled to reach $9.44 billion. (As an inland province without direct waterway access, Alberta exports tend to be undervalued in national trade statistics. This is because the accounting system used credits exports to the province in which they are first laden aboard a carrier for exports, which may not necessarily be the same province in which they are grown, extracted or manufactured). If "invisible" service exports and undercounted agricultural exports are added to this official figure, Alberta's exports in 1981 were considerably more than $10 billion.

The annual value of Alberta's exports has been growing at a rate faster than the national average. Under the official accounting system, Alberta's 1981 exports increased by 18.3 per cent compared to a growth of 9.4 per cent in total Canadian exports. As a result, Alberta's share of national exports increased to 11.6 per cent in 1981, compared to 10.7 per cent the previous year and 9.6 per cent in 1979.

Alberta exports have traditionally been concentrated in terms of both commodity groups and destinations. Resources, particularly natural gas and crude petroleum, have been the major items for export, and the United States, by far, the major export market. There are, however, indications that Alberta's exports are becoming increasingly diversified. In 1981, the two major non-resource commodity groups increased their share of total exports to 9.3 per cent from 2.2 per cent the previous year. Also in 1981, the share of exports going to the United States, which in 1974 stood at 95.5 per cent, showed a continued decline to 88.3 per cent.



Transportation

Economic growth has always been closely linked with the development of transportation systems. The development of modern transportation networks, combined with the increasing value of Alberta's resources, have been important factors in the province's economic transformation of recent years. Better transportation facilities have contributed to improvements in the quality of life, particularly in smaller communities.

There are currently more than 14,000 kilometres of paved highways and roads linking major centres in the province. First class arterial roads and highways link up with similar main highways in adjacent provinces and American states.

Four railway companies serve Alberta: the Canadian National, the Canadian Pacific, Alberta Resources and the Great Slave Lake Railway. There are about 11,000 kilometres of line in operation, providing connections east and west to ocean ports as well as to the Canadian north, and south to the United States.

Air transportation plays an important role in the development of Alberta. There are 82 licensed and numerous unlicensed airports, used by many provincially-based firms providing a variety of services, including air charters, aerial surveys and pipeline inspection. Both passenger and air cargo activities have been expanding rapidly.

Two major airlines, Canadian Pacific and Air Canada, provide scheduled regional, national and international passenger and air freight services. Pacific Western Airlines is a major regional carrier of freight and passengers, especially into the north, while Time Airways serves numerous Alberta communities. A number of United States carriers provide Calgary and Edmonton with international flights; in addition, Wardair serves Alberta with international flights on a charter basis.

A growing emphasis is being placed on modern transportation services for the urban centres of Alberta. This emphasis not only relates to the efficient movement of people, but reflects a determination to avoid the adverse environmental implications of improperly planned transportation. In 1974, the Alberta government announced an urban transportation policy and programme, including the commitment of funds to be used for public transit systems, arterial roadways, and urban transportation studies and planning. It was designed to supplement the normal transportation services which local governments already provide to their citizens. Its purpose was to alleviate financial and environmental pressures resulting from private automobile travel, and to provide a convenient and comfortable service to the public.

Five Alberta cities currently operate public transit systems. Other urban and suburban communities are served by publicly owned or privately contracted bus services. The second leg of the first light rail transit project in western Canada is under construction in Edmonton. A similar system is in operation in Calgary.

The government has committed itself to assisting the development of high capacity throughways in each of Alberta's major centres. These throughways, connecting major highways, assist in the movement of trans-city traffic and act as major internal arterials for the cities.

Communications

Radio and television, both public and private, extend to all parts of the province. Alberta is served by 36 AM and nine FM radio broadcast originating stations as well as 72 rebroadcast stations. A total of 12 television stations operate in the major centres, with 104 rebroadcast stations effecting province-wide coverage. In addition, Alberta is served by 21 cable systems reaching approximately 65 per cent of the population. Many of the cable systems offer commercial-free pay television channels. Virtually every household in Alberta owns a television set; almost 90 per cent have a colour set.

Nine daily newspapers and more than 120 weekly newspapers are published in Alberta. The dailies are published in the major centres of Edmonton, Calgary, Lethbridge, Medicine Hat, Red Deer, Grande Prairie and Fort McMurray. Their total circulation approaches 540,000 copies, or about 85 per cent of all households. Weekly newspapers report a gross circulation of over one million copies. The magazine publishing trade is growing, serving such specialized fields as the oil industry, agriculture, leisure and business development.

Albertans are among Canada's greatest telephone users with about 1.9 million telephones and extensions serving a population of 2.3 million. Alberta Government Telephones, the principal telephone company in the province has more than 1.3 million telephones in service. Other communications systems include a microwave network, two large teletype systems, and a wire service. The more remote regions of northern Alberta benefit from the communications satellite, "Anik", through which the Canadian Broadcasting Corporation provides radio and television programming to sparsely populated areas throughout northern Canada.

Energy Resources

Crude Oil

Although crude oil and natural gas have been produced in Alberta for local consumption since the turn of the century, the largest and most productive oil fields were discovered during the past 30 years. At the beginning of 1982, Alberta's remaining recoverable reserves of conventional crude oil totalled 696 million cubic metres (4.4 billion barrels). Most of these reserves are of light and medium gravity, with a low sulphur content, and are produced in fields in the central and northwestern parts of the province. Smaller amounts of heavy gravity crude oil are present in east-central and south-eastern Alberta.

The potential for heavy oil development and production is considerable. In addition to conventional crude oil, natural gas fields in various areas of the province contain some 321.2 million cubic metres (11.3 billion cubic feet) of remaining recoverable reserves of propanes, butanes, and pentanes plus.

Net production of crude oil (and equivalent liquids) in 1981 was 57 million cubic metres (398 million barrels). Of total crude oil deliveries that year, 22 per cent were consumed locally, 68 per cent shipped to other provinces of Canada (primarily Ontario), and 10 per cent exported to refineries in the northern United States. Exports to the United States have declined sharply since 1974 as a result of Canada's conservation policy of restricting exports and extending eastern Canadian pipelines into Montreal resulting in more Alberta oil finding markets in Canada.

Oil Sands and Synthetic Oil

Alberta's long term supplies of petroleum are assured by the presence of vast reserves of oil recoverable from Alberta's oil sands. These oil bearing sands underlie five large areas in northern Alberta which are estimated to contain 155 billion cubic metres (980 billion barrels) of oil.

The largest oil sands deposit is found in northeastern Alberta, adjacent to the Athabasca River where beds of oil sands are exposed at the surface. The Athabasca area contains some 114 billion cubic metres (717 billion barrels) of oil in place, of which approximately four per cent, or 4.8 billion cubic metres (30 billion barrels), is recoverable using present open-pit mining and extraction technology. Two plants are currently producing from these deposits. One plant is producing approximately 4,600 cubic metres (28,700 barrels) per day of high grade synthetic oil although maximum capacity is 9,200 cubic metres (58,000 barrels). The other produces 13,400 cubic metres (84,300 barrels) per day while the maximum capacity is approximately 15,000 cubic metres (94,000 barrels).

Although the oil sands along the Athabasca River can be exploited by open-pit mining, 95 per cent of the deposits in the Athabasca area are too deep to be accessible by this technique. These deeper Athabasca deposits and essentially all of the reserves contained in the Cold Lake, Peace River, Wabasca, and Buffalo Head Hills areas, must be developed by what are known as "in situ" techniques. These involve the injection of air to support underground combustion, or steam to mobilize the oil, enabling it to flow to the surface. Currently, one experimental "in situ" recovery project is operating in the Cold Lake area, extracting approximately 507,000 cubic metres (3.2 million barrels) of heavy oil annually. This project has opened the way for 16 other advanced recovery experimental operations in other oil sands areas which collectively produced 162,000 cubic metres (one million barrels) of oil in 1981.

The importance of oil sands development to the growth and stability of the Alberta economy led, in 1976, to a $100 million commitment by the government to the Alberta Oil Sands Technology and Research Authority (AOSTRA). The initial commitment was made for research projects funded jointly with private industry and other research organizations. By the end of 1979, the amount of funds available were increased and the mandate of AOSTRA was expanded to fund research into enhanced recovery techniques for conventional oil deposits, as well as oil sands deposits. In 1981, funding was further increased to $418 million.

Natural Gas and Liquid Co-Products

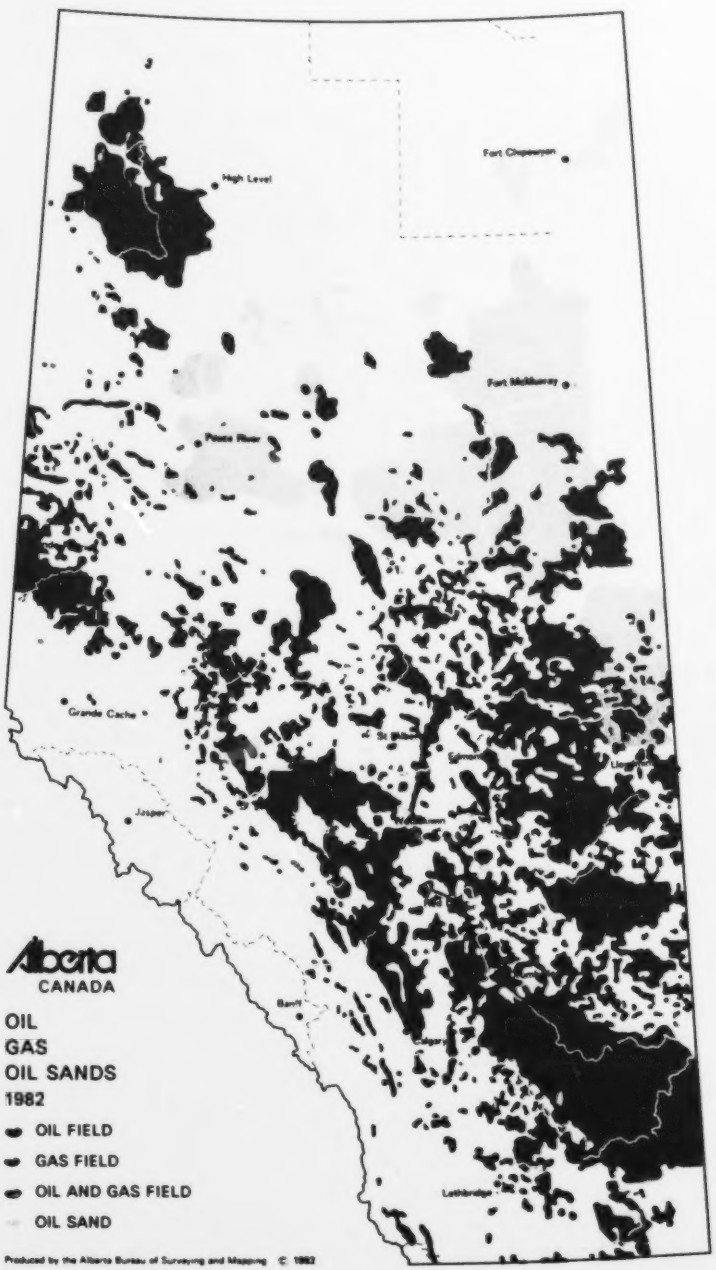
Abundant deposits of natural gas are found in many areas of Alberta. Total remaining recoverable reserves, as of the end of 1981, were estimated at 1.8 trillion cubic metres (63.6 trillion cubic feet), with ultimate recoverable reserves estimated at 3.8 trillion cubic metres (134.2 trillion cubic feet). In 1981, approximately 76.5 billion cubic metres (2,702 billion cubic feet) of natural gas were produced. Of total deliveries, 23 per cent were consumed locally, 43 per cent shipped to other Canadian provinces, and 31 per cent exported to the United States.

Many of the natural gas reserves are wet and /or sour, containing an abundance of liquid co-products (propane, butanes, and pentanes plus) and sulphur. During the past 25 years, the petroleum industry has developed a highly sophisticated technology designed to process wet and sour gas to remove the liquid co-products and sulphur. As a result, excluding refinery production, Alberta produces approximately 95 per cent of Canada's pentanes plus, propane and butanes, the bulk of which go to other Canadian provinces or are exported to the United States.

Table 3 **Petroleum and Natural Gas Production — 1975-1981**

Year	Crude Oil (Mm^3)*	Synthetic Crude Oil (Mm^3)	Conden-sate (Mm^3)	Pentanes Plus (Mm^3)	Natural Gas (MMm^3)*	Propane (Mm^3)	Butanes (Mm^3)
1975							
1976							
1977							
1978							
1979							
1980							
1981							

Mm^3 = Thousand cubic metres MMm^3 = Million cubic metres * Net Production



Coal

Petroleum and natural gas have dominated Alberta's energy scene for the past 30 years, but the province's vast coal resources are, once more, the subject of intensive exploration and development activity. Extending under much of the southern and central Plains region and west into the Rocky Mountains, these coal resources provide a massive source of primary energy or, alternatively, a potential feedstock for synthetic fuels and chemicals.

There is a wide range in the grades and potential uses of Alberta's coal deposits. Sub-bituminous coal beds predominate in the Plains region, and many deposits are sufficiently shallow for open-pit mining. These coals are ideal for thermal power generation and, possibly in the future, for the manufacture of chemicals and synthetic fuels. Various types of bituminous coal are found in the Rocky Mountains and their foothills, grading into semi-anthracite in a few localities. Some of these deposits are suitable for coking or metallurgical purposes, whereas others can be utilized for thermal power generation. Virtually all Alberta coal has a very low sulphur content, generally less than one per cent.

In 1981, coal production totalled 18.0 million tonnes, of which approximately 62.5 per cent was sub-bituminous, used mainly for thermal power generation, and 37.5 per cent high grade metallurgical coal destined for export, primarily to Japan.

Remaining recoverable reserves of coal are estimated at 12 billion tonnes. Approximately 60 per cent is sub-bituminous coal and 40 per cent bituminous. Recoverable reserves of high volatile bituminous coal exceeds 9 billion tonnes, and is currently under development in five separate locations for sale to the province of Ontario and export markets in Japan, Korea and Europe. Recoverable reserves of coking coal exceed 10 billion tonnes and are exported primarily to Japan and Korea.

Undoubtedly, additional exploration will greatly enhance these reserve figures, especially with respect to deeper coal beds which could be exploited by underground mining.

Development work has been undertaken by the Alberta government and several private sector companies to examine a coal/methanol and coal/water slurry transportation system. As markets develop, indications are that this method of energy transporation will be undertaken.

Electric Power

Alberta's electric power grid reaches all but the most remote areas of the province. Operated by private utility companies and municipalities, this grid transports electric energy generated by hydro plants and plants fueled by coal or natural gas. Total net generation in 1981, from all sources, totalled 24,501 gigawatt hours (GW.h).

The hydro electric component of this grid is provided by several power plants on major rivers in the Rocky Mountains and Foothills. Alberta's hydro electric potential is estimated at 60,000 GW.h per year. In 1981 2,000 GW.h per year were generated from an estimated capacity of 7,000 GW.h per year. Much of the remaining undeveloped hydro potential is in the northern, more remote areas, where the demand for electric power is relatively low. Nevertheless, as the economy becomes more diverse and as industrial growth associated with oil sands and petrochemicals occurs, further hydro development can be expected. Future thermal power plants will be coal-fired, in many cases with the coal being surface mined alongside the plants.

Mineral Resources

Alberta's non-fuel mineral resources are varied and extensive. Mainly non-metallic, these so-called "industrial minerals" serve as basic raw material for a variety of industries. Although no production of metallic minerals is currently taking place, a few deposits do exist.

The industrial minerals fall into two main groups: those used for construction materials and those used in chemical industries. The value of production of both groups totalled $919 million in 1981.

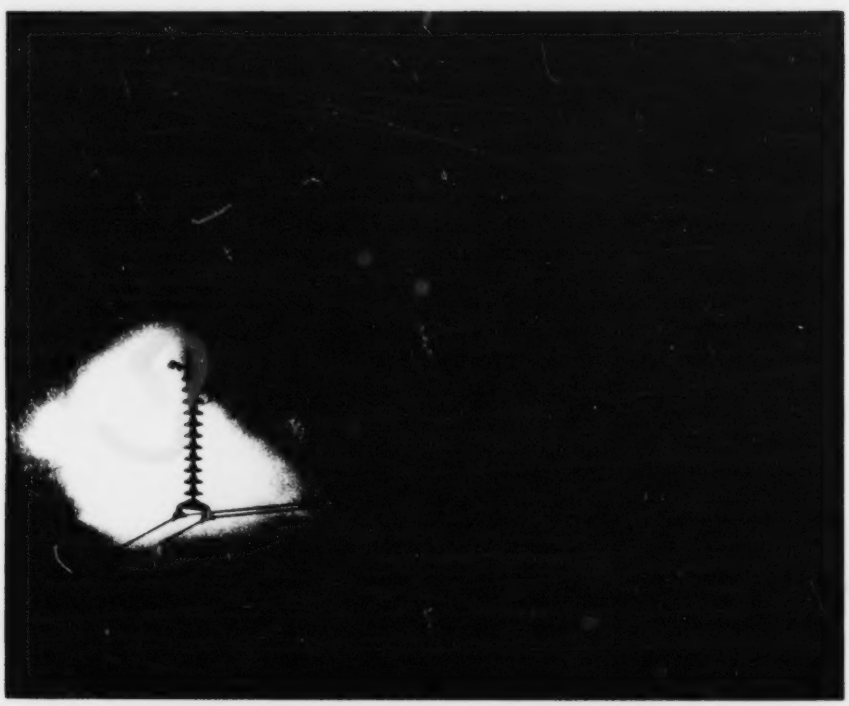
Construction-oriented minerals include raw materials for cement, ceramics and building products manufacture, and others used essentially unaltered for aggregates. Deposits are sufficiently developed to supply both local and export markets.

There are two cement plants operating in Alberta. They produced about 1.4 million tonnes of cement in 1981, making use of ample supplies of clays, shales and limestone. Cement production in 1981 was valued at $135.4 million.

Construction aggregates constitute, by far, the largest volume of industrial mineral production in Alberta. Sand and gravel, with annual production of over 25 million tonnes, are the major minerals used. Manufactured lightweight aggregates have specialized application, mostly in large urban construction projects. They include, mainly, expanded clays and shales. Other non-metallic minerals produced are silica sand, granite, sandstone, limestone and marble.

Exclusive of hydrocarbons, minerals basic to Alberta's chemical industries are sulphur, salt, saltcake (sodium sulphate), and lime. Alberta is the world's largest producer of sulphur from hydrocarbon sources. In 1981, marketed production of sulphur from gas processing plants, as well as a small portion recovered from the processing of oil sands, was 8.0 million tonnes valued at $675 million.

Other non-metallic minerals produced include bentonite and peat moss. Large



deposits of dolomite also are located in the province, but are not presently being utilized.

Deposits of metallic minerals exist in various areas, such as the Canadian Shield in northern Alberta. These provide a favourable geologic setting for metallic minerals exploration. Uranium and molybdenite showings have been found in the area north of Lake Athabasca. Other metals with development potential include copper, lead, zinc, iron ore, magnesium, titanium, vanadium, and nickel.

Table 4 **Non-Fuel Mineral Production — 1981**

	Volume (Thousands of Tonnes)	Value (Thousands of Dollars)
Non-Metallics		
(Industrial Minerals)		
Peat Moss		
Quartz		
Salt		
Sodium Sulphate		
Sulphur, Elemental		
Total Non-Metallics		699,538
Structural Materials		
Clay Products		
Cement		
Lime		
Sand and Gravel		
Stone		
Total Structural Materials		219,552
Total Non-Fuel Minerals		**919,090**

Agriculture

Land is one of Alberta's great natural resources. About 20.2 million hectares (50 million acres) are utilized in crop and livestock production, with approximately 12.5 million hectares (31 million acres) classified as cultivated. It is estimated that an additional 8.1 million hectares (20 million acres) could be broken and added to farmland inventory.

With so much prime agricultural land, it is not surprising that Alberta has developed a highly productive agricultural economy. Alberta accounts for over one-fifth of total Canadian primary agricultural output. Export marketing of agricultural products is of considerable importance because of the province's relatively small population. Growing demands for a greater variety of agricultural commodities are being met by farmers who can quickly diversify their production. For example, while canola (rapeseed) was virtually unknown to Alberta farmers two decades ago, 1981 production reached one million tonnes.

Alberta producers are proud of their worldwide reputation for high quality agricultural products. Wheat is sold through the Canadian Wheat Board (a federal agency) to more than 50 countries. The cattle industry also serves a world-wide market, supplying dairy and beef animals, as well as semen for stock improvement purposes. Alberta honey, averaging 40 per cent of annual Canadian production, is rated among the best in the world.

The trend towards larger, more economically viable farms, is taking place primarily by consolidations of existing operations. Twenty-five years ago, the average size of an Alberta farm was 220 hectares (545 acres). Today, this has increased to 350 hectares (866 acres). Farm operations have become capital intensive in order to reduce unit production costs and compete favourably in domestic and international markets. In 1981, total farm capital value exceeded $36 billion.

Part of the heavy capital investment in agriculture continues to be directed toward increasing livestock production. Alberta maintains the largest livestock population of Canada's western provinces. In 1981, the combined cattle and calf slaughter amounted to 347 million kilograms (765 million pounds) of beef and veal. Total pork production reached 104 million kilograms (229 million pounds), poultry, 52 million kilograms (115 million pounds), and mutton and lamb, 1.1 million kilograms (2.4 million pounds). Although Albertans annually consume about 75 kilograms (165 pounds) of meat per capita, the bulk of meat production is destined for other Canadian consumers and export markets.

Specialized livestock feeding operations create a growing demand for feed grain production. In 1981, Alberta farmers produced more than 8.2 million tonnes of barley, oats and mixed grains. Over three million hectares of oats and barley are seeded each year, more than in any other province.

Alberta producers continue to increase wheat production in response to demands for high quality Red Spring and summer wheats. In 1981, wheat was grown on about 2.6 million hectares (6.4 million acres), with total production exceeding 6.0 million tonnes. As local consumption accounts for only one-fifth of the annual production, there is considerable reliance on export sales.

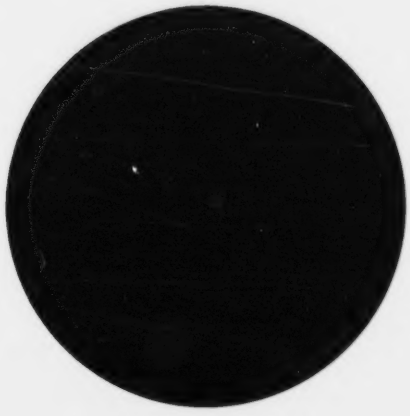
The export of other agricultural products is becoming increasingly important as well. More than half of

Canadian exports of forage seed originate in Alberta. The production of dehydrated alfalfa, a relatively new undertaking, has increased rapidly during the past decade.

In the southern region of the province, high summer temperatures, a long growing season and irrigation, make possible the production of specialties that cannot be grown successfully in central and northern areas. Continued research and experimentation are being carried out to improve the cooling and processing of fresh vegetables, thus extending the period during which quality can be maintained.

Agriculture will continue to play a key role in the province's economy. The Alberta government has announced a major program to expand and upgrade the already extensive irrigation networks in southern Alberta. It is expected that an increasing proportion of products will be processed locally, thus diversifying and stimulating secondary production in all regions.

Alberta Farm Cash Receipts — 1981



1 Crops	54%
2 Livestock	38%
3 Other	8%

1981 Total Receipts = $3.88 Billion

Manufacturing

Alberta's potential for manufacturing is only starting to be realized. In 1981, the value of manufacturers' shipments reached $13.0 billion, based on net value of production of $4.3 billion.

Traditionally, Alberta has had several market disadvantages: a small domestic population, significant distance from major markets, and high transportation costs to those markets. In recent years, however, a number of major factors have offset some of these disadvantages: population growth in Alberta and western Canada continues to provide a larger and more affluent consumer market; the corporate tax rate is the lowest in Canada; and the province has one of Canada's largest financial centres, a highly trained labour force and an assured supply of competitively priced hydrocarbon resources attractive to industry. Factors such as these have enabled Alberta to increase its share of total Canadian manufacturing shipments from 5.5 per cent in 1977 to 6.9 per cent in 1981.

The petroleum and coal products industries had 1981 shipments valued at $2.84 billion, representing a 37 per cent increase over the 1980 level. Associated with petroleum refining is the chemical, and chemical products industries, whose manufacturing shipments totalled $1.35 billion. Combined, the two industries' shipment values have exceeded the food and beverage industry. Alberta's major petrochemical products include methanol, ethylene, a number of associated derivatives and co-products, and fertilizer materials such as ammonia and urea. A number of petrochemical complexes have been completed recently or are currently under construction. By 1985, petrochemical capacity is expected to increase by about 6,000 kilotonnes.

Food processing has played a major role in the Alberta economy. In 1981, food and beverage firms accounted for 26.5 per cent of all manufacturing shipments. The value of shipments during that year increased 12 per cent, reaching $3.43 billion.

Value of Manufacturing Shipments — 1981

1 Petroleum, Coal and Chemical Products	32%
2 Food and Beverage	27%
3 Metal Industries	19%
4 Forest Products	9%
5 Miscellaneous Industries	13%

1981 Total Manufacturing Shipments = $12.96 Billion

The primary metal manufacturing industries, which include steel mills, and pipe and tube mills, had shipments valued at $796 million in 1981. The output of metal fabricating industries during that year reached $791 million. Over the last two decades, metal fabricating has had one of the highest rates of growth of all Alberta's manufacturing industries.

Other manufacturing sectors include the non-metallic mineral products industries, with 1981 shipments valued at $704 million, the machinery industry, with shipments of $667 million and wood industries, with shipments of $576 million. The accompanying table gives a listing of all manufacturing industries in Alberta.

Table 5 **Value of Manufacturing Shipments — Alberta — 1981**

	$'000
Petroleum, Coal and Chemical Products	
Petroleum and Coal Products	
Chemical and Chemical Products	
Food and Beverage	
Metal Industries	
Primary Metal	
Metal Fabricating	
Machinery	
Transportation Equipment	
Forest Products	
Wood Industries	
Paper and Allied	
Furniture and Fixtures	
Miscellaneous Industries	
Non-Metallic Mineral Products	
Printing, Publishing, and Allied	
Electrical Products	
Textiles	
Miscellaneous Manufacturing	
Other	
Total Manufacturing	**12,958,117**

Forestry

Alberta's forested areas cover some 390,000 square kilometres (150,600 square miles), or 60 per cent of the province's 661,000 square kilometres (255,200 square miles). Forest management policies have been developed to protect and manage the many benefits derived from this valuable timber resource. These policies have evolved into a modern integrated forest management system administered by the Alberta Forest Service.

The forests of Alberta contain a net merchantable volume of timber totalling some 1.7 billion cubic metres, permitting an allowable annual cut of 28 million cubic metres. Actual harvesting totals 6 million cubic metres annually, indicating a harvest potential several times current levels while still maintaining a net growth in timber volume. Coniferous species comprise 57 per cent of the growing stock and deciduous species, 43 per cent.

Alberta's wood and pulp (paper and allied) industries were comprised of over 450 manufacturing establishments in 1981, directly employing 8,300 persons. The value of the industries' 1981 shipments is estimated to reach $952 million.

Tourism and Recreation

Alberta's travel industry generated an estimated $1.35 billion in revenue during 1981. With an overall average increase per year of almost 14 per cent from 1971 to 1981, the industry has experienced healthy growth and is becoming increasingly important to the economy.

Alberta is an attractive destination for tourists because of its natural settings, including the world-famous Banff and Jasper national parks, set in the Canadian Rockies, and an extensive system of provincial parks. Annual events such as the Calgary Stampede, Edmonton's Klondike Days and the Banff Festival of the Arts attract many visitors to Alberta each summer. International events draw many international visitors to the province. Kananaskis Provincial Park was chosen as the site of the 1983 Boy Scouts World Jamboree; Edmonton was selected to host the 1983 World University Games, and Calgary, the 1988 Winter Olympics.

Dinosaur Provincial Park, in southern Alberta, has become well-known among researchers in many parts of the world as a result of significant discoveries of dinosaur fossils. This growing recognition was confirmed in 1979, when the World Heritage Committee of the United Nations Educational, Scientific and Cultural Organization named the park to the World Heritage List. Also named to the list, in 1981, was "Head-Smashed In" Buffalo Jump near Fort McLeod in southwestern Alberta, a cliff used centuries ago by natives to drive herds of buffalo to mass slaughter. This method of hunting was instrumental in meeting the food, clothing and shelter needs of the tribes in the period before the horse was introduced to North America.

Alberta was the first province to establish provincial parks in urban areas. Fish Creek Park in Calgary and Capital City Park in Edmonton were designed to give urban residents easy access to recreational and park facilities. In addition, more than 60 provincial parks and wilderness areas have been set aside to preserve a natural environment for future generations.

The Alberta government provides funding and professional guidance to local governments, private organizations, and sports and recreation associations. It encourages participation in outdoor activities and an appreciation of nature. By supporting sports and fitness programs it strives to improve the calibre of athletes and to encourage wider public participation in sporting activities.

Education

In Canada, education is a provincial responsibility. Basic education (grades 1 - 12) in Alberta comes under the jurisdiction of the Department of Education and is available to all children at no charge. Higher education and adult retraining are provided by the Advanced Education and Manpower departments. Modest fees are charged for higher education and adult retraining courses.

The advanced education system includes four public universities (Alberta, Calgary, Lethbridge, Athabasca), three technical institutes, and 10 community colleges, as well as various provincial vocational centres, private trade schools under government supervision, and other specialized schools.

Universities offer degree programs at the bachelor, master and doctorate levels, as well as professional studies in numerous areas. Athabasca University is an open university using correspondence as a method of providing undergraduate courses to adult Albertans. Public and private colleges offer general education and community service courses as well as one-year certificates and two-year diploma programs leading to vocational careers. Several provide university transfer courses.

Both the Northern Alberta Institute of Technology (NAIT) and the Southern Alberta Institute of Technology (SAIT) offer two-year technical, industrial, business and vocational programs, as well as apprenticeship training. SAIT also incorporates the Alberta College of Art, which offers one-year to four-year programs in studies such as painting, sculpture and ceramics. A third, the Western Institute of Technology, is currently under construction.

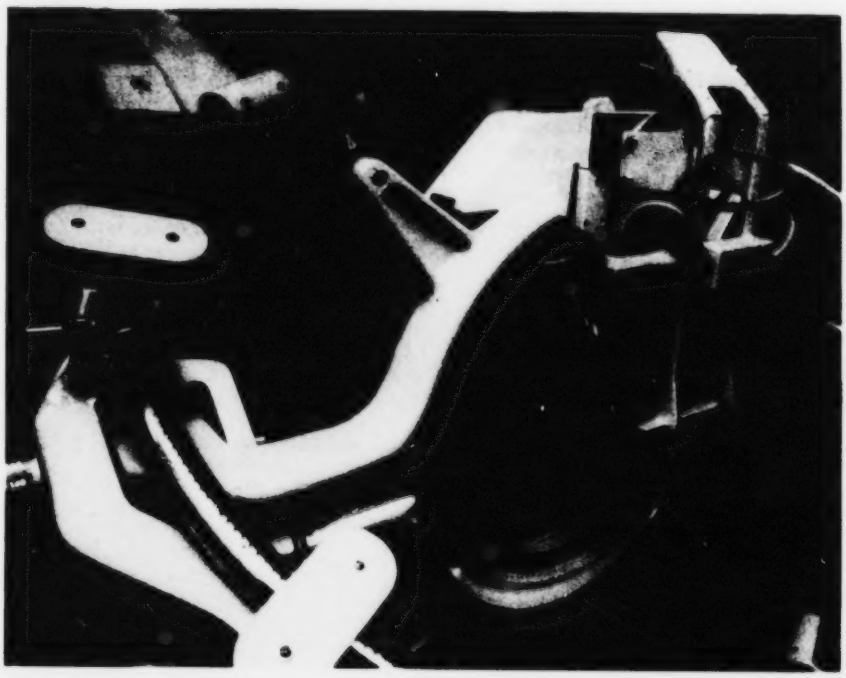
Technical and vocational training aimed at developing occupational skills is available at four adult vocational centres and numerous vocational centres. In addition to academic upgrading, these centres provide short and intensive employment courses plus basic English for new Canadians. The Alberta Petroleum Industry Training Centre prepares people for work in the oilfields. There also are nearly 100 private trade schools operating under government supervision.

The Banff School of Fine Arts is a residential centre with a renowned, worldwide reputation for education in the visual and performing arts, specializing in music, drama, ballet, and painting. The Banff Centre also houses the School of Advanced Management and Environmental Studies.

Manpower Policy and Programs

The Department of Manpower attempts to ensure maximum employment opportunities for Albertans. It provides three basic services: regulating and administering the training and certification of tradesmen through the apprenticeship and journeyman levels; identifying short and long term manpower needs and attempting to fill them provincially, interprovincially, or off-shore; and helping individuals realize their career potential, preparing for the transition from school to work to retirement.

The apprenticeship and certification programs cover 43 designated trades. Alberta Career Centres provide career information, vocational and educational counselling, testing, and referrals for training. Manpower Mobility Offices in Edmonton, Toronto and London, England, assist in recruiting individuals to meet labour needs which cannot be met locally. They also promote entrepreneurial immigration aimed at encouraging the economic development of Alberta.



Health and Social Services

The Alberta Health Care Insurance Plan provides basic health and hospitalization coverage for all citizens. Coverage includes the services of general practitioners, medical specialists, osteopaths, optometrists, chiropractors and podiatrists. The average family pays $28 per month in premiums. Special subsidized rates are available for low-income individuals and families. All senior citizens and their dependents are provided with free coverage which includes hearing aids, eye glasses, dental work and dentures, and some prescribed medical appliances.

Preventive health services are provided by 27 local health authorities and two city health departments. These free services may include prenatal classes, childrens' clinics, immunization programs, family planning and family life education, dental services, health inspection (to enforce housing, food and water regulations), speech and audiology services, and home care (including nursing, rehabilitation, home-making, meals, and other support services).

Citizens' Rights

Albertans enjoy the rights and privileges all Canadians enjoy. Many of these rights derive from the British traditions of parliamentary democracy and common law. In addition, the federal government has introduced laws, such as the Canadian Bill of Rights and the recently enacted Constitution Act, which further protect the rights of all Canadians.

Similarly, the province has proclaimed the Alberta Bill of Rights and the Individual Rights Protection Act, which protect rights with regard to labour, housing, and public services. These laws take precedence over all other provincial legislation and prohibit discrimination on the basis of race, colour, religious belief, ancestry, place of origin, age, or sex. The Alberta Human Rights Commission is empowered to review cases of discrimination. Although 99 per cent of all cases are settled by mediation, if necessary they can be heard by a board of inquiry.

Alberta also had the first ombudsman in Canada, although this position has existed for many years in other parts of the world. The ombudsman is appointed to protect individuals from being improperly affected by government decisions. The ombudsman is autonomous from all government departments and reports only to the provincial legislature.

Culture

Alberta offers a large number of cultural activities. Diverse ethno-cultural groups have brought their own traditions with them and are encouraged to maintain and develop their cultural heritage. There are more than 1,200 ethno-cultural organizations in the province which are eligible to receive support for cultural and linguistic programs.

The Alberta government has programs to support the visual, performing and literary arts as well as museums and historic sites. The two major museums are the Glenbow Institute in Calgary and the Provincial Museum in Edmonton. Alberta's cultural agencies and groups also receive federal government support through such agencies as the Canada Council.

Environmental Protection

The establishment of environmental legislation and guidelines administered by the Department of Environment reflects the desire of Albertans that the quality of the environment not be eroded through mismanagement. The Energy Resources Conservation Board has historically assured orderly development of energy resources. Large areas of protected parks and wilderness areas have been set aside. Many pieces of legislation protect air, land, and water.

Legislation

Alberta's environmental legislation is comparable in scope, intent and technical restrictions to that found in many other parts of the world.

The Department of the Environment Act provides for the designation of restricted development areas to achieve environmental goals and to establish utility corridors. It also establishes procedures for the purchase of land. The Land Surface Conservation and Reclamation Act regulates surface disturbances and land reclamation associated with resource development. The Agricultural Chemicals Act regulates the use of herbicides and pesticides while the drainage of agricultural lands is regulated by the Drainage Districts Act. Other statues provide for the regulation of pollution. These include the Clean Air, Clean Water, Beverage Containers, Litter and Ground Water Control acts.

Water and Air

Alberta averages only 45 centimetres of precipitation annually, making careful water management very important to the province. Water is strictly monitored for contamination. Major programs have provided water level stabilization, flow regulation, and hydro-electric generating capacity in many areas. Water supplies for municipalities, agriculture, and industry are reliable.

Air quality is protected through advance determination of whether industrial equipment will limit emissions satisfactorily. Air monitoring is carried on continuously throughout Alberta.

Alberta's Future

Alberta remains a province of opportunity within Canada. Although affected by the global economic recession, basic resources, like agriculture, forestry and energy will continue to be in demand. As well, human and financial resources are readily available in Alberta to effectively utilize these resources, and to continue the diversification of the economy towards processing, manufacturing and specialized technologies.

The expansion of international trade and investment around the world will bring Alberta into closer contact with new and traditional trading partners. Alberta's skilled labour force, expertise in many areas of contemporary technology and its resources will ensure that Alberta's economic performance will not falter.

POOR

QUALITY

ORIGINAL